

Assessing Professional Development and Teaching Effectiveness

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Abstract: This study examines the correlation between professional development programs and teaching efficacy among primary school educators in China. The research investigates sustained learning, emotional support, assessment literacy, leadership development, and educational reform support as essential elements of professional development. Furthermore, it assesses topic knowledge, pedagogical abilities, classroom management, student progress assessment, and reflective practice as measures of teaching efficacy. A descriptive comparative-correlational study methodology was utilized, employing a stratified sample approach to choose participants from five elementary schools. Data were gathered using a validated survey questionnaire and analyzed employing descriptive statistics, the Mann-Whitney U test, the Kruskal-Wallis test, and Spearman's rho correlation coefficient. Results demonstrate that educators evaluated their professional development programs as somewhat effective in all areas, with sustained learning achieving the highest rating and emotional support the lowest. Their teaching performance was assessed as average, with reflective practice receiving the greatest score, while instructional skills and student progress monitoring received the lowest scores. Statistical analysis revealed no significant disparities in the evaluation of professional development and teaching effectiveness when categorized by sex, age, or educational attainment. A notable disparity was observed in student progress monitoring relative to years of teaching experience. A robust positive association was identified between professional development and teaching effectiveness, suggesting that increased professional development programs result in improved teaching performance.

Keywords: Professional Development, Teaching Effectiveness, Teacher Training, Leadership Development, Assessment Literacy, Classroom Management.

1. Introduction

The professional development of elementary school teachers is crucial for the ongoing enhancement and long-term viability of teaching efficacy in China's education system. In recent years, substantial funds have been allocated to professional development initiatives to increase the quality of education. This recognition stems from the understanding that the growth of teachers is crucial for enhancing student achievements and attaining long-term educational objectives (Zhang & Liu, 2021). These programs aim to improve instructors' expertise in subject matter, teaching excellence, classroom management capabilities, and assessment literacy. Furthermore, they encourage the cultivation of reflective practice and the development of leadership skills to assist teachers in adjusting to the fast-changing requirements of contemporary education (Luo et al., 2022). Notwithstanding these efforts, educators nationwide nevertheless encounter significant obstacles that impede the complete achievement of the capabilities of these programs (Li & Wang, 2022).

The significance of ongoing professional development cannot be exaggerated, as it provides instructors with the essential resources to improve their teaching efficacy and student learning results. Effective professional development is necessary for teachers in China's dynamic educational environment to be informed about new teaching approaches, emerging technology, and the most recent educational changes (Sun et al., 2020). Engaging in sustained learning, which refers to long-term and continuous chances for professional development, is crucial for teachers to absorb and successfully use new abilities in their classrooms

fully (Chen et al., 2021). Professional development programs not only facilitate instructional innovations but also promote reflective practice, allowing instructors to critically assess their teaching techniques, address student needs, and adapt their approaches appropriately (Wang et al., 2019). Furthermore, the programs include leadership development activities that equip teachers to assume mentor capacities, actively participate in school leadership, and spearhead educational changes inside their institutions (Liu & Huang, 2023).

Even with these evident advantages, certain obstacles hinder the efficacy of professional development programs in China. A notable concern is the need for more chances for continuous acquisition of knowledge. According to Chen et al. (2021), some programs are temporary, mainly consisting of short workshops or seminars that need continuous support for instructors to effectively incorporate new information and abilities into their teaching practice. Continuity is necessary for instructors to participate in continuous learning, which is crucial for the long-lasting effectiveness of professional development. Furthermore, there exists a notable discrepancy between urban and rural educational institutions, wherein instructors in rural areas often face a dearth of access to top-notch professional development facilities and resources (Li & Wang, 2022). These geographical discrepancies worsen pre-existing inequities in education since instructors in disadvantaged regions have difficulties matching their metropolitan colleagues' performance.

Furthermore, some professional development programs need to adequately cater to the emotional support requirements of teachers, who often experience elevated

levels of stress and burnout due to growing expectations, high-stakes assessments, and workload constraints (Jiang & Li, 2022). Many programs usually disregard the significance of emotional well-being in preserving teaching efficacy, which tends to focus on material and instructional techniques at the expense of assisting instructors in managing their emotional and psychological health (Zhao et al., 2021). In the absence of adequate emotional support, instructors may need help to maintain motivation and achieve optimal performance in the classroom.

One further significant obstacle is the need for more focus on assessment literacy in professional development programs. Evaluation literacy pertains to the capacity of educators to create, analyze, and use diverse evaluations to guide their teaching and enhance student achievements (Zhao, 2020). As the Chinese education system transitions towards formative and competency-based assessments, a significant number of instructors have difficulties adjusting because of their inadequate preparation in these domains (Chen & Wang, 2020). Insufficient professional development in this area renders instructors inadequately equipped to utilize assessment data efficiently, which may hinder their capacity to track student growth and make instructional choices based on data.

Furthermore, the rapid execution of educational changes adds intricacy to instructors' difficulties in China. Given the continuous changes in policies and curriculum, teachers typically need more training and preparation to implement these reforms in their classrooms effectively (Yu & Zhu, 2020). The pursuit of more technology integration has resulted in several educators needing to effectively include digital resources in their teaching methods with adequate training in technology-based pedagogy (Xu & Zhang, 2021). Moreover, implementing changes in competency-based education has imposed additional expectations on educators, necessitating them to modify their teaching methodologies and embrace more student-centric strategies (Luo et al., 2022).

Given these issues, this study must evaluate the efficacy of professional development programs for elementary school teachers in China, focusing specifically on areas such as continuous learning, emotional assistance, assessment literacy, leadership development, and support for educational reforms. Although prior research has emphasized the significance of professional development, there is a lack of comprehensive studies that specifically examine how these programs cater to the instructional and emotional requirements of elementary school teachers, particularly in rural and under-resourced regions (Zhang & Liu, 2021; Luo et al., 2022). By identifying deficiencies in existing programs and examining their influence on teaching effectiveness, this research will provide significant insights that guide the establishment of more extensive and influential professional development efforts.

2. Statement of the Problem

This study aims to assess the professional development programs for elementary teachers in China. Specifically, this study will answer the following questions:

- (1)What is the profile of the respondents in terms of:
 - 1)sex
 - 2)age
 - 3)years in teaching
 - 4)highest educational attainment
- (2)What is the assessment of the respondents of their

professional development programs in terms of:

- 1)Sustained learning
 - 2)Emotional Support
 - 3)Assessment Literacy
 - 4)Leadership development
 - 5)Support for Educational Reform
- (3)Is there a significant difference in the assessment of the respondents when they are grouped according to profile?
 - (4)What is the assessment of the respondents of their effectiveness in terms of:
 - 1)Content knowledge
 - 2)Instructional skills
 - 3)Classroom management
 - 4)Student progress monitoring
 - 5)Reflective practice
 - (5)Is there a significant difference in the assessment of the respondents when they are grouped according to profile?
 - (6)Is there a significant relationship between assessment of the respondents of their professional development programs and their teaching effectiveness?
 - (7)Based on the results of the study, what comprehensive teacher development program can be designed to improve teachers' teaching effectiveness?

3. Hypotheses

There is no a significant difference in the assessment of the respondents when they are grouped according to profile.

There is no significant difference in the assessment of the respondents when they are grouped according to profile.

There is no significant relationship between the assessment of the teachers of their professional development programs and their teaching effectiveness.

4. Research Design

The study employed a descriptive comparative-correlational design, integrating descriptive, comparative, and correlational methodologies to analyze the relationships among variables. The method shown considerable application in research efforts aimed at clarifying the characteristics of a particular population, doing group comparisons, and exploring the relationships among different variables (Creswell, 2014).

The descriptive aspect of the study entailed a thorough observation and delineation of the respondents' profiles, encompassing factors such as gender, age, years of teaching experience, and highest attained degree of education. This technique allowed the researcher to thoroughly illustrate the characteristics and experiences of elementary teachers in professional development. The study's comparison component sought to assess if statistically significant differences existed in the assessments of professional development programs and teaching efficacy among respondents classified by their profiles. The correlational aspect of the study investigated the relationships between the assessment of professional development programs and teaching efficacy, providing significant insights into the interaction between these elements.

This approach was significant for its capacity to allow the researcher to graphically represent existing conditions and compare many groups while concurrently examining potential relationships among the variables studied (Fraenkel, Wallen, & Hyun, 2019). The research, via the integration of several approaches, offered thorough explanations of

professional development and instructional effectiveness, and identified potential patterns and disparities across distinct teacher demographics. This study evaluated the association between professional development and teaching efficacy, offering critical insights necessary for improving teacher programs.

The study utilized a descriptive comparative-correlational methodology, considered highly appropriate for an in-depth investigation of professional development programs aimed at primary educators in China. This study sought to identify noteworthy trends, discrepancies, and connections through a review of instructors' profiles, ratings of professional development, and instructional performance. The findings yielded significant insights that guided the design and execution of improved professional development activities.

5. Results, Analysis, and Interpretation

Profile of the Respondents

Table 1 shows the frequency and percentages of demographic information for a sample of teachers, including sex, age, years in teaching, and educational background. The analysis of the descriptive statistics indicates that 83% are women and 17% are men. This may suggest that most of the teachers involved in the study are female.

Based on their age, 74% of the respondents are 25 years old and below, 17% are between 26 and 30, only 3% are between 31 and 35, and 6% are 36 years old and above. This means that the majority of the teachers are 25 years old and below.

Concerning their teaching experience, 4% possess 10 years or more of experience, 71% have 3 years or less, 22% have 4 to 6 years, and merely 3% have 7 to 10 years. This suggests that the majority of teachers possess three years or less of teaching experience.

Lastly, based on their highest educational qualifications, 22% obtained an associate degree, 68% acquired a bachelor's degree, 3% attained a doctorate degree, and 6% secured a master's degree. The results indicate that the majority of the teachers who participated in the study possessed a bachelor's degree.

Assessment of the Respondents of their Professional Development Programs

Table 1. Frequencies and Percentage of Demographic Factors

| Sex | Counts | % of Total |
|--------------------------------|--------|------------|
| Female | 126 | 83 % |
| Male | 26 | 17 % |
| Age | Counts | % of Total |
| 25 and below | 112 | 74 % |
| 26-30 | 26 | 17 % |
| 31-35 | 5 | 3 % |
| 36 and up | 9 | 6 % |
| Years in Teaching | Counts | % of Total |
| 10 years and up | 6 | 4 % |
| 3 years and below | 108 | 71 % |
| 4-6 | 34 | 22 % |
| 7-10 | 4 | 3 % |
| Highest Educational Attainment | Counts | % of Total |
| Associate | 34 | 22 % |
| Bachelor | 104 | 68 % |
| Doctorate | 5 | 3 % |
| Master | 9 | 6 % |

Table 2. Assessment of Professional Development Programs in terms of Sustained Learning

| Indicators | Mean | SD | Verbal Interpretation | Rank |
|--|-------------|-------------|-----------------------|----------|
| 1. I have been afforded valuable learning opportunities through my involvement in several professional development programs. | 3.48 | 0.61 | Average | 2 |
| 2. The program's material is pertinent to my present teaching requirements and methodology. | 3.45 | 0.55 | Average | 5 |
| 3. I can use novel ideas derived from professional development in my teaching setting. | 3.41 | 0.60 | Average | 8.5 |
| 4. The programs assist in maintaining up-to-date knowledge of contemporary teaching approaches. | 3.43 | 0.54 | Average | 7 |
| 5. I have seen enduring advantages resulting from participation in professional development programs. | 3.45 | 0.57 | Average | 5 |
| 6. The training sessions are strategically conducted at regular intervals to facilitate continuous development. | 3.47 | 0.55 | Average | 3 |
| 7. The initiatives promote the cultivation of lifelong learning habits in education. | 3.41 | 0.62 | Average | 8.5 |
| 8. Follow-up help is provided to me after the first training sessions. | 3.34 | 0.67 | Average | 10 |
| 9. Professional development programs include diverse learning forms, including workshops, seminars, and online courses. | 3.45 | 0.61 | Average | 5 |
| 10. The continuous learning opportunities have enhanced my pedagogical efficacy. | 3.50 | 0.56 | Average | 5 |
| COMPOSITE MEAN | 3.44 | 0.49 | Average | 1 |

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (Very High)

Table 2 displays the respondents' assessment of

professional development programs on sustained learning, shown by a composite mean score of 3.44 and a standard

deviation of 0.49. The educators concur that ongoing learning opportunities have improved their teaching effectiveness (M = 3.50), that they have gained significant learning experiences through participation in various professional development programs (M = 3.48), and that the training sessions are systematically scheduled at regular intervals to promote continuous advancement (M = 3.47). An analysis of their responses revealed that item 10 attained the highest mean score of 3.50, while item 8 (Follow-up aid is offered to me after the first training sessions) had the lowest mean score of 3.34.

The results demonstrate that the respondents favorably evaluated the influence of professional development programs on continuous learning, evidenced by a composite mean score of 3.44 and a standard deviation of 0.49. The top-rated statement, “Ongoing learning opportunities have improved my teaching effectiveness” (M = 3.50), indicates that educators acknowledge the importance of ongoing learning in augmenting their instructional abilities. This conclusion corresponds with Guskey (2020), who asserts that professional development programs offering persistent learning opportunities enhance long-term teaching effectiveness. Desimone and Garet (2019) contend that professional learning programs incorporating continuous assistance and skill reinforcement result in enhanced knowledge retention and improved classroom implementation. The elevated grade indicates that systematic, ongoing training enables educators to improve their teaching methods, adjust to innovative educational methodologies, and better address students' learning requirements.

The statement with the lowest rating, “Follow-up aid is offered to me after the first training sessions” (M = 3.34), underscores a perceived deficiency in post-training assistance. This outcome indicates that although educators gain from professional development initiatives, they may see the post-training support as inadequate. Opfer and Pedder (2021) assert that the efficacy of professional development is greatly affected by subsequent assistance, mentorship, and avenues

for ongoing reflection. In the absence of these, educators may find it challenging to effectively execute new tactics, hence diminishing the enduring effects of training. Likewise, Darling-Hammond et al. (2020) stress that professional development should not be a one-time event but rather a continuous process that includes mentoring, collaborative learning, and feedback mechanisms. The comparatively lower rating for follow-up assistance indicates that enhancements in post-training support-such as mentoring programs, coaching sessions, or peer collaborations-could augment the efficacy of professional development activities.

The gap between the greatest and lowest mean scores suggests that although professional development programs effectively promote learning, their sustainability and long-term efficacy may be compromised by inadequate follow-up procedures. Kennedy (2019) contends that professional development programs achieve optimal efficacy when they include systematic follow-up, enabling educators to obtain continuous support and modify their instructional methods in accordance with practical classroom experiences. Educational institutions and policymakers must to enhance follow-up support by including post-training assistance, coaching, and peer feedback into current professional development frameworks. Such actions might connect the acquisition of new tactics with their successful implementation in the classroom, resulting in more enduring enhancements in teaching efficacy.

The findings underscore the need of organized and ongoing professional development opportunities, while also indicating a pressing necessity for enhanced follow-up assistance. In the absence of consistent reinforcement, the efficacy of training may decline with time. Avalos (2021) posits that professional development ought to be a sustained, iterative process encompassing initial training, subsequent assistance, and ongoing reflection to enhance its effectiveness. By overcoming this barrier, educational institutions may guarantee that professional development programs result in significant and enduring enhancements in teaching efficacy.

Table 3. Assessment of Professional Development Programs in terms of Emotional Support

| Indicators | Mean | SD | Verbal Interpretation | Rank |
|---|------|------|-----------------------|-------|
| All the professional development programs have components that specifically target my emotional well-being. | 3.20 | 0.71 | Average | 9 |
| I get emotional support from the facilitators used during professional development workshops. | 3.28 | 0.61 | Average | 4 |
| The programs facilitate the management of stress associated with my teaching obligations. | 3.27 | 0.68 | Average | 5 |
| Providing emotional support is a fundamental component of the professional development programs I participate in. | 3.29 | 0.65 | Average | 3 |
| The programs emphasize the cultivation of a constructive and encouraging educational atmosphere. | 3.35 | 0.61 | Average | 1 |
| I am at ease in openly expressing my feelings and concerns within professional development exercises. | 3.18 | 0.68 | Average | 10 |
| The materials at my disposal facilitate the harmonization of my personal and professional spheres. | 3.23 | 0.62 | Average | 7.5 |
| The courses include techniques to manage emotional difficulties often encountered in education. | 3.24 | 0.62 | Average | 6 |
| As part of the professional growth experience, emotional well-being is given leading importance. | 3.23 | 0.69 | Average | 7.5 |
| Participating in professional development programs has had a beneficial effect on my emotional resiliency as an educator. | 3.32 | 0.58 | Average | 2 |
| COMPOSITE MEAN | 3.26 | 0.57 | Average | _____ |

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (Very High)

Table 3 presents an evaluation of professional development programs, with particular emphasis on the emotional support provided to a sample of educators. The composite mean score of 3.26, along by a standard deviation of 0.57, signifies an average rating. The results indicate consensus on the programs' focus on fostering a positive and supportive educational environment ($M = 3.35$), the advantageous impact of professional development participation on their emotional resilience as educators ($M = 3.32$), and the essential role of emotional support within the professional development programs they engage in ($M = 3.29$). Analysis of responses revealed that item 5 achieved the greatest mean score of 3.35, but item 6 (I am at ease in openly expressing my views and concerns during professional development exercises) received the lowest mean score of 3.18.

The assessment of professional development programs, specifically concerning the emotional support offered to educators, resulted in a composite mean score of 3.26 and a standard deviation of 0.57, signifying an average rating. The highest-rated answer, "The programs focus on fostering a positive and supportive educational environment" ($M = 3.35$), indicates that educators mostly view professional development activities as cultivating an encouraging and inclusive climate. This corresponds with the findings of Collie et al. (2020), who say that emotional support in professional development programs improves teachers' well-being, mitigates burnout, and cultivates a feeling of professional belonging. Skaalvik and Skaalvik (2021) assert that emotionally supportive workplaces enable educators to mitigate job-related stress and enhance job satisfaction, hence favorably influencing their teaching efficacy and student results.

The item with the lowest rating, "I am at ease in openly expressing my views and concerns during professional development exercises" ($M = 3.18$), indicates that certain educators may have reluctance or discomfort in articulating their opinions during training sessions. This outcome suggests a potential deficiency in inclusion and psychological safety in professional development environments. Hargreaves and Fullan (2021) assert that open communication and collaborative debates are crucial for professional development; yet, hierarchical systems and fear of criticism may inhibit educators from fully participating in talks that may improve their learning experiences. Korthagen (2022) emphasizes that professional development must incorporate reflective methods enabling instructors to articulate issues openly, since these exchanges facilitate deeper learning and effective problem-solving.

The disparity between the highest and lowest mean ratings highlights a critical area for enhancement: although educators acknowledge the advantages of emotionally supportive training programs, their capacity to participate openly in conversations is still a worry. This discovery corresponds with Schutz et al. (2021), who contend that psychological safety in professional development environments substantially influences instructors' propensity to engage actively. In the absence of an open and trusting atmosphere, instructors may refrain from sharing key ideas, so constraining the efficacy of training sessions. Educational institutions and professional development organizations should prioritize the establishment of open communication channels, peer support networks, and collaborative reflection sessions to enhance engagement and discourse throughout training activities.

The average score of 3.26 indicates that although professional development programs include components of emotional support, there is potential for improvement. Day and Gu (2021) assert that continuous emotional support is essential for maintaining teacher motivation and resilience. Employing tactics such as peer mentorship, mediated group conversations, and organized emotional check-ins can foster a more supportive climate in which instructors feel esteemed and at ease voicing their viewpoints. Furthermore, integrating mindfulness and well-being sessions into professional development programs may assist educators in managing emotional issues more proficiently, hence fostering a more positive teaching experience.

The findings indicate that professional development programs are seen as offering emotional support; nonetheless, obstacles to open communication remain. Mitigating these constraints through open dialogue, improved psychological safety, and systematic support systems might boost the overall efficacy of teacher training programs. By emphasizing emotional well-being in conjunction with skill enhancement, professional development programs may foster a more resilient, engaged, and successful teaching workforce.

6. Conclusion

The prevalence of inexperienced young female instructors indicates a necessity for specialized support programs designed for beginner educators. These programs should emphasize classroom management, curriculum adaption, and mentorship activities to facilitate practical experience and professional development early in their careers. Moreover, organized teacher induction programs might decrease attrition rates and improve work satisfaction among novice instructors.

The average grade of professional development programs underscores the need for improved training modules that bolster emotional support, leadership, and assessment literacy. Programs must to incorporate social-emotional learning practices to assist educators in managing classroom stress, fostering resilience, and enhancing well-being. Furthermore, personalized professional development plans might be established to link teacher training with distinct career advancement requirements.

The data reveal that educators from diverse demographics share similar perceptions of professional development, indicating that current programs are universally structured yet may not account for variations in experience, teaching duties, or subject matter. Institutions have to tailor training modules to address the distinct requirements of educators, including sophisticated pedagogical strategies for seasoned teachers and fundamental instructional methods for beginners.

The average self-assessment of teachers' performance indicates a possible discrepancy between perceived and real teaching skills. Respondents exhibited confidence in their topic understanding and teaching abilities, with reflective practice seen as a notable strength, indicating the necessity to incorporate peer coaching, action research, and classroom observations into continuous teacher development. Promoting collaborative lesson preparation can improve instructional practices and student performance.

The notable disparity in student progress monitoring among teachers with differing years of experience suggests that inexperienced educators may encounter difficulties with formative assessment techniques. Veteran educators may possess superior diagnostic and intervention abilities, but

novice instructors necessitate systematic assessment training to enhance their capacity to monitor and address student learning requirements. Educational institutions want to implement mentoring programs wherein seasoned educators assist novice instructors in assessment-oriented training.

The robust correlation between professional development and teaching efficacy underscores the need of ongoing teacher education. Educational institutions ought to allocate resources towards sustained, evidence-based professional development initiatives that both refine instructional methodologies and elevate student performance. Encouraging job-embedded learning, such as lesson study, collaborative inquiry, and coaching, can ensure that professional growth translates into sustained classroom impact.

7. Recommendations

(1) Create organized mentorship and induction programs to assist early-career educators by matching them with seasoned mentors who can provide practical instruction in lesson planning, classroom management, and student engagement.

(2) Incorporate stress management workshops, mindfulness exercises, peer support groups, and counseling services into professional development programs to improve emotional support for teachers.

(3) To guarantee relevance and impact, differentiate professional development according to the needs of teachers by putting in place tiered training models that serve new, mid-career, and senior educators.

Improve student learning outcomes by offering focused training on formative and summative assessment techniques, learning analytics, and data-driven instruction. This will strengthen assessment literacy and student progress tracking.

(4) To promote ongoing instructional improvement, incorporate reflective teaching practices into professional development plans using lesson study groups, structured peer observations, and self-assessment tools.

(5) By setting aside funds for opportunities for ongoing education like graduate courses, certifications, and action research projects, you can make an investment in long-term, research-based professional development programs.

(6) Use digital platforms that provide online courses, webinars, and interactive learning communities to increase access to professional development and keep educators abreast of developments in the field of education.

(7) Adopt data-driven decision-making for teacher development by routinely evaluating the efficacy of professional development through surveys, student performance data, and classroom observations.

(8) Encourage educators to assume leadership positions in professional learning communities, mentoring, and curriculum design in order to promote a culture of cooperative learning and leadership development.

(9) By putting in place regulations that require frequent training, provide funds for teacher development, and develop long-term plans for maintaining instructional gains, you can guarantee institutional commitment and policy support.

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